

FILE 'HCAPLUS' ENTERED AT 12:24:43 ON 09 JUN 2010

L1 307 S MANNOOLIGOSACCHARIDE OR (MANNO OLIGOSACCHARIDE)
L2 5 S (MANNOOLIGOSACCHARIDE OR (MANNO OLIGOSACCHARIDE) OR OLIGOMANN
L3 156 S CASEINOGLYCOMACROPEPTIDE OR CASEINGLYCOMACROPEPTIDE OR (CASEI
L4 900941 S BACTERIA OR BACTERIAL OR DIARRHEA OR DIARRHEAL OR (COLI) OR S
L5 903112 S BACTERIA OR BACTERIAL OR DIARRHEA OR DIARRHEAL OR (COLI) OR S
L6 17 S L3 AND L5

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 FILE LAST UPDATED: 8 Jun 2010 (20100608/ED)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2010
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2010

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2010.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s mannooligosaccharide or (manno oligosaccharide)
    271 MANNOOLIGOSACCHARIDE
    2866 MANNO
    34983 OLIGOSACCHARIDE
        44 MANNO OLIGOSACCHARIDE
            (MANNO(W)OLIGOSACCHARIDE)
L1      307 MANNOOLIGOSACCHARIDE OR (MANNO OLIGOSACCHARIDE)

=> s (mannooligosaccharide or (manno oligosaccharide) or oligomannose or
(mannose(3a)oligosaccharide))(4a)(methyl or methylated or methylation)
    271 MANNOOLIGOSACCHARIDE
    2866 MANNO
    34983 OLIGOSACCHARIDE
        44 MANNO OLIGOSACCHARIDE
            (MANNO(W)OLIGOSACCHARIDE)
        376 OLIGOMANNOSE
    47009 MANNOSE
    34983 OLIGOSACCHARIDE
    1148205 METHYL
    45992 METHYLATED
    110001 METHYLATION
L2      5 (MANNOOLIGOSACCHARIDE OR (MANNO OLIGOSACCHARIDE) OR OLIGOMANNOSE
        OR (MANNOSE(3A)OLIGOSACCHARIDE))(4A)(METHYL OR METHYLATED OR
        METHYLATION)
```

=> d 12 1-5 ti abs bib

L2 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2010 ACS ON STN
TI Immunoassay kits for detection of α -fetoprotein fractions
AB A kit for detection of α -fetoprotein (AFP) fractions (cancer marker)
in body fluids consists of (1) lectin-containing agarose gel, (2) anti-AFP
antibody immobilized on nitrocellulose membranes, (3) monosaccharides or
oligosaccharides which specifically interact with the lectin, (4) anti-AFP
antibody prepared by immunization of another animal species, (5)
enzyme-labeled antibodies to the Ig, and (6) chromogen substrates for the
enzyme. The lectin is concanavalin A, lentil lectin A, or kidney bean
lectin. The monosaccharide is α -methyl-D-mannoside,
glucose, or mannose and the oligosaccharide is
maltose.

AN 1987:210590 HCAPLUS <<LOGINID:20100609>>

DN 106:210590

OREF 106:34093a,34096a

TI Immunoassay kits for detection of α -fetoprotein fractions

IN Takeda, Kazuhisa; Taga, Hiroko; Hirai, Hidematsu

PA Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 61292062 | A | 19861222 | JP 1985-123969 | 19850606 |
| PRAI | JP 1985-123969 | | 19850606 | | |

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L2 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2010 ACS ON STN
TI 3-O-Methylation of mannose residues. A novel reaction in the processing
of N-linked oligosaccharides occurring in *Mucor rouxii*
AB Yeast- and mycelial-form cells of the dimorphic fungus *M. rouxii* incubated
with [U-¹⁴C]glucose synthesized Man-P-dolichol, Glc-P-dolichol, and
Glc3Man9GlcNAc2-P-P-dolichol. The oligosaccharides that migrated
apparently as single substances on paper chromatog. could be separated into 3
different populations by paper electrophoresis in sodium borate buffer.
The fastest migrating substances contained only mannose and
N-acetylglucosamine residues, whereas the other 2 contained, in addition,
different proportions of 3-O-methylmannose units. The oligosaccharides
with the highest content of 3-O-methylmannose residues appeared to be
completely resistant to α -mannosidase degradation; they were, however,
cleaved by endo- β -N-acetylglucosaminidase H. Mycelial cells
synthesized a much higher proportion of 3-O-methylmannose-containing
oligosaccharides than yeast cells. Cells incubated with
[methyl-¹⁴C]methionine labeled only the N-linked oligosaccharides containing
3-O-methylmannose residues. Apparently transfer of Glc3Man9GlcNAc2
to protein is followed by excision of glucose and probably 1 or 2 mannose
residues, followed by further mannosylation and in some cases also
methylation of oligosaccharides. This represents a novel reaction in the
processing of N-linked oligosaccharides.

AN 1984:626603 HCAPLUS <<LOGINID:20100609>>

DN 101:226603

OREF 101:34327a,34330a

TI 3-O-Methylation of mannose residues. A novel reaction in the processing
of N-linked oligosaccharides occurring in *Mucor rouxii*

AU Lederkremer, Gerardo Z.; Parodi, Armando J.

CS Inst. Invest. Bioquim. "Fundacion Campomar", Buenos Aires, 1405, Argent.

SO Journal of Biological Chemistry (1984), 259(20), 12514-18

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal
LA English

L2 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Isolation and characterization of the Glc3Man9GlcNAc2 from lipid-linked oligosaccharides of plants

AB Lipid-linked oligosaccharides were isolated from suspension-cultured soybean cells incubated in the presence of [2-3H]mannose or [2-3H]glucose. After purification of the lipid-linked oligosaccharides on DEAE-cellulose, the oligosaccharides were released by mild acid hydrolysis and isolated by gel filtration on columns of Bio-Gel P-4. The major oligosaccharide, labeled with either [3H]mannose or [3H]glucose, that comigrated with an authentic sample of Glc3Man9GlcNAc2 was purified to homogeneity by repeated chromatog. on Bio-Gel P-4. This oligosaccharide was characterized by its susceptibility to a variety of enzymic treatments (i.e., endoglucosaminidase H, α -mannosidase, a liver membrane preparation containing the processing glucosidases) and anal. of the resulting products. It was also characterized by methylation anal. and identification of the resulting methylated sugars. Thus, methylation of the [3H]mannose-labeled oligosaccharide gave rise to 2,3,4,6-tetramethylmannose, 3,4,6-trimethylmannose, and 2,4-dimethylmannose, as well as a trace amount of 2,4,6-trimethylmannose. Methylation of the [3H]glucose-labeled oligosaccharide yielded 2,3,4,6-tetramethylglucose, 3,4,6-trimethylglucose, and 2,4,6-trimethylglucose in almost equal amts. These data suggest that the plant Glc3Man9GlcNAc2 is probably similar, if not identical, to the animal Glc3Man9GlcNAc2. The biosynthesis of this oligosaccharide was inhibited when tunicamycin was included in the incubation mixts.

AN 1982:139717 HCAPLUS <<LOGINID:20100609>>

DN 96:139717

OREF 96:22921a,22924a

TI Isolation and characterization of the Glc3Man9GlcNAc2 from lipid-linked oligosaccharides of plants

AU Hori, Hidetaka; James, Douglas W., Jr.; Elbein, Alan D.

CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA

SO Archives of Biochemistry and Biophysics (1982), 215(1), 12-21

CODEN: ABBIA4; ISSN: 0003-9861

DT Journal
LA English

L2 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Synthetic studies on cell-surface glycans. Part 12. Proton and carbon-13 NMR spectral study of synthetic methyl D-mannooligosaccharides

AB 1H- and 13C-NMR spectra for 16 synthetic Me manno-oligosaccharides were recorded, and the signals for the anomeric protons and anomeric carbon atoms in branched manno-pentaosides and -hexaosides were assigned, based on the data for Me manno-biosides and -triosides. These NMR data identified the branching pattern of high-mannose types of glycans of glycopeptides with those of unambiguously synthesized manno-oligosaccharides, and confirmed the structures proposed for such glycans.

AN 1982:123143 HCAPLUS <<LOGINID:20100609>>

DN 96:123143

OREF 96:20233a,20236a

TI Synthetic studies on cell-surface glycans. Part 12. Proton and carbon-13 NMR spectral study of synthetic methyl D-mannooligosaccharides

AU Ogawa, Tomoya; Sasajima, Kikuo

CS Inst. Phys. Chem. Res., Wako, 351, Japan

SO Carbohydrate Research (1981), 97(2), 205-27

CODEN: CRBRAT; ISSN: 0008-6215

DT Journal
LA English
OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L2 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2010 ACS ON STN
TI Characterization of 3-O-methyl-D-mannose polysaccharide precursors in
Mycobacterium smegmatis
AB M. smegmatis, When incubated under appropriate conditions with
L-methionine-Me-3H, accumulates significant amts. of small Me-3H-labeled
oligosaccharides that are related to the known 3-O-methyl-D-mannose
polysaccharides. The water-soluble material from the 70% EtOH extract of such
cells was fractionated by Sephadex G-50 column chromatog., high pressure
liquid chromatog., and Bio-Gel P-4 column chromatog. Two homologous series
of penta- through decamannosyl methylated oligosaccharides were obtained
and characterized by chemical degradation and NMR. All hexoses were $\alpha(1$
 $\rightarrow 4)$ linked, the Me aglycon had the α configuration, and the
mannose was methylated in position 3. All of the compds. were
structurally related to each other as though they were biosynthetic
precursors of the larger 3-O-methylmannose polysaccharides. A
methylmannobiose that may represent an early intermediate in the pathway
was detected in small amts.

AN 1979:416343 HCAPLUS <<LOGINID:20100609>>

DN 91:16343

OREF 91:2713a,2716a

TI Characterization of 3-O-methyl-D-mannose polysaccharide precursors in
Mycobacterium smegmatis

AU Yamada, Haruki; Cohen, Robert E.; Ballou, Clinton E.

CS Dep. Biochem., Univ. California, Berkeley, CA, 94720, USA

SO Journal of Biological Chemistry (1979), 254(6), 1972-9

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

=> s caseinoglycomacropeptide or caseinglycomacropeptide or
(casein(3a)glycomacropeptide)

19 CASEINOGLYCOMACROPEPTIDE

0 CASEINGLYCOMACROPEPTIDE

67117 CASEIN

295 GLYCOMACROPEPTIDE

138 CASEIN(3A)GLYCOMACROPEPTIDE

L3 156 CASEINOGLYCOMACROPEPTIDE OR CASEINGLYCOMACROPEPTIDE OR (CASEIN(3
A)GLYCOMACROPEPTIDE)

=> s bacteria or bacterial or diarrhea or diarrheal or (coli) or salmonella or
clostridium

391664 BACTERIA

336958 BACTERIAL

26579 DIARRHEA

1962 DIARRHEAL

336373 COLI

55485 SALMONELLA

30699 CLOSTRIDIUM

L4 900941 BACTERIA OR BACTERIAL OR DIARRHEA OR DIARRHEAL OR (COLI) OR SALM
ONELLA OR CLOSTRIDIUM

=> s bacteria or bacterial or diarrhea or diarrheal or (coli) or salmonella or
clostridium or enteritis

391664 BACTERIA

336958 BACTERIAL

26579 DIARRHEA
1962 DIARRHEAL
336373 COLI
55485 SALMONELLA
30699 CLOSTRIDIUM
3818 ENTERITIS

L5 903112 BACTERIA OR BACTERIAL OR DIARRHEA OR DIARRHEAL OR (COLI) OR SALMONELLA OR CLOSTRIDIUM OR ENTERITIS

=> s 13 and 15

L6 17 L3 AND L5

=> d 16 1-17 ti abs bib

L6 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Effects of a partially digested whey protein concentrate on Salmonella enterica serotype Typhimurium adhesion to Caco-2 cells

AB The effect of a partially lipase-digested whey protein concentrate (WPD) containing

free fatty acids on the adherence of Salmonella enterica serovar Typhimurium to Caco-2 cells was investigated. A short concurrent exposure of the Caco-2 monolayers and WPD caused dose-dependent inhibition of bacterial adhesion. Pre-treatment of S. Typhimurium with WPD resulted in inhibition of adhesion equivalent to that with concurrent administration, whereas treatment with WPD did not significantly inhibit adhesion. WPD was not bactericidal towards S. Typhimurium at up to 50 mg ml⁻¹ for up to 1 h, but was bacteriostatic over 12 h. High concns. of WPD (> 20 mg ml⁻¹) were cytotoxic to newly-confluent cell monolayers, depending on the duration of exposure. Lactoferrin (LF), caseinoglycomacropeptide (CGMP), and gamma globulins all significantly inhibited S. Typhimurium adhesion.

AN 2010:435112 HCAPLUS <<LOGINID:20100609>>

TI Effects of a partially digested whey protein concentrate on

Salmonella enterica serotype Typhimurium adhesion to Caco-2 cells

AU Morrissey, Paul E. W.; Folan, Michael A.; Baird, Alan W.; Irwin, Jane A.

CS Veterinary Sciences Centre, UCD School of Agriculture, Food Science & Veterinary Medicine, University College Dublin, Dublin, 4, Ire.

SO Food Control (2010), 21(8), 1113-1120

CODEN: FOOCEV; ISSN: 0956-7135

PB Elsevier Ltd.

DT Journal

LA English

L6 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Effect of casein glycomacropeptides (CGMP) on microflora in cecum of mice

AB This study aimed to investigate the effects of casein glycomacropeptides (CGMP) with different doses on microflora in cecum of mice. One hundred and twenty-six BALB/c mice were randomly divided into six groups (the control groups and treatment groups). The control 1 group was administered only with normal fodder. The control 2 group was administered physiol. saline at the dose of 0.2 mL/d. The treatment groups were administered the equal volume of CGMP with different concns. for 15d. At 0 (before terminating), 3, 5, 7, 10, 15 and 22 d (after terminating CGMP for 1 wk) the microflora in the cecum of the tested mice was analyzed in each group, resp. The results showed that in the middle dose group (100 µg/d), the nos. of Bifidobacterium (P<0.05) and Lactobacillus increased (P<0.01), but those of Enterobacter, Enterococcus, opportunistic pathogenesis decreased (P<0.05), compared with the controls groups. The results proved that appropriate dose of CGMP had the function of regulating the intestinal flora, stimulating Bifidobacterium and Lactobacillus to grow, and inhibiting the growth of pathogenic

bacteria.

AN 2009:1187292 HCAPLUS <<LOGINID::20100609>>
 DN 152:255126
 TI Effect of casein glycomacropeptides (CGMP) on microflora in cecum of mice
 AU Cao, Jinyi; Chen, Qingsen; Liang, Chenxi; Yan, Yali
 CS Tianjin Key Laboratory of Food Biotechnology, College of Biotechnology and Food Science, Tianjin University of Commerce, Tianjin, 300134, Peop. Rep. China
 SO Shipin Kexue (Beijing, China) (2008), 29(10), 582-585
 CODEN: SPKHD5; ISSN: 1002-6630
 PB Zhongguo Shipin Zazhishe
 DT Journal
 LA Chinese

L6 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
 TI Effects of Bovine α -Lactalbumin and Casein Glycomacropeptide-enriched Infant Formulae on Faecal Microbiota in Healthy Term Infants

AB Objective: Certain milk factors may promote the growth of a host-friendly gastrointestinal microbiota, for example, one that is predominated by bifidobacteria, a perceived health-promoting genus. This may explain why breast-fed infants experience fewer intestinal infections than their formula-fed counterparts who are believed to have a more diverse microbiota, which is similar to that of adults. The effects of formulas supplemented with 2 such ingredients from bovine milk, α -lactalbumin (α -lac) and casein glycomacropeptide (GMP), on gut flora were investigated in this study. Patients and methods: Six-week-old (4-8 wk), healthy term infants were randomized to a standard infant formula or 1 of 2 test formulas enriched in α -lac with higher or lower GMP until 6 mo. Fecal bacteriol. was determined by the culture-independent procedure fluorescence in situ hybridization. Results: There was a large fluctuation of bacterial counts within groups with no statistically significant differences between groups. Although all groups showed a predominance of bifidobacteria, breast-fed infants had a small temporary increase in counts. Other bacterial levels varied in formula-fed groups, which overall showed an adult-like fecal microflora. Conclusions: It can be speculated that a prebiotic effect for α -lac and GMP is achieved only with low starting populations of beneficial microbiota (eg, infants not initially breast-fed).

AN 2006:1249838 HCAPLUS <<LOGINID::20100609>>
 DN 146:273318
 TI Effects of Bovine α -Lactalbumin and Casein Glycomacropeptide-enriched Infant Formulae on Faecal Microbiota in Healthy Term Infants

AU Brueck, Wolfram M.; Redgrave, Michele; Tuohy, Kieran M.; Loennerdal, Bo; Graverholt, Gitte; Hernell, Olle; Gibson, Glenn R.
 CS Food Microbial Sciences Unit, School of Food Biosciences, The University of Reading, Reading, UK
 SO Journal of Pediatric Gastroenterology and Nutrition (2006), 43(5), 673-679
 CODEN: JPGND6; ISSN: 0277-2116
 PB Lippincott Williams & Wilkins
 DT Journal
 LA English

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
 TI Glycomacropeptide protects against experimental endotoxemia and bacteremia in mice

AB The aim of this study was to evaluate protective effects of

glycomacropeptide (GMP), a kappa casein-derived peptide, in expt1. induced endotoxemia or bacteremia in mice. The results showed that BALB/c mice, given i.p. GMP, 24h before i.v. injection of a high dose of lipopolysaccharide (LPS) from *Escherichia coli*, strongly inhibited serum levels of tumor necrosis factor alpha (TNF alpha) and interleukin 6 (IL-6), measured 2h later by bioassays. In addition, GMP, administered 24h before infection of CBA mice with a sublethal dose of *E. coli*, significantly lowered the number of bacterial cells in the spleen. The anal. of main blood cell types in mice pretreated 24h prior to infection with GMP revealed significant increase in the content of granulocytes and immature neutrophils. We, therefore, postulate, that induction of myelopoiesis by GMP may be a primary cause of the increased clearance of bacteria during the development of bacteremia in mice.

AN 2006:490093 HCAPLUS <<LOGINID:20100609>>
 DN 145:388738
 TI Glycomacropeptide protects against experimental endotoxemia and bacteremia in mice
 AU Zimecki, Michal; Artym, Jolanta; Chodaczek, Grzegorz; Kocieba, Maja;
 Rybka, Jacek; Skorska, Anna; Kruzel, Marian
 CS Laboratory of Immunobiology, The Institute of Immunology and Experimental Therapy, Wroclaw, Pol.
 SO Electronic Journal of Polish Agricultural Universities (2006), 9(2), No pp. given
 CODEN: EPAUFC; ISSN: 1505-0297
 URL: <http://www.ejpau.media.pl/volume9/issue2/art-12.html>
 PB Wydawnictwo Akademii Rolniczej we Wroclawiu
 DT Journal; (online computer file)
 LA English
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2010 ACS ON STN
 TI Functional and biological activities of casein glycomacropeptide as influenced by lipophilization with medium and long chain fatty acid
 AB This study determined the functional and different biol. activities of casein glycomacropeptide (GMP) after conjugation with fatty acids. Medium (i.e. caproic, lauric and myristic acid) and long (i.e. palmitic and stearic acid) fatty acids were conjugated to GMP at the available amino group. Functionalities of lipophilized GMP conjugates included foaming and emulsifying activities, and biol. activities for bacterial growth inhibition, cell damage and anti-invasion. Greater lipophilization of GMP was achieved with medium chain fatty acids ($p < 0.05$), which resulted in reduced GMP solubility regardless of fatty acid conjugate. Foaming activity of GMP was lost after lipophilization, but emulsification activity of GMP was enhanced ($p < 0.05$). A parallel increase in growth inhibition of *Salmonella* spp. coupled with anti-invasion of *Salmonella enteritidis* (Inv A) into mammalian cells was induced by lipophilization of GMP with long chain fatty acid. Our results show that GMP modified by lipophilization with specific fatty acids provides improved functionality as a surfactant with enhanced antibacterial activity towards gram neg. bacteria.
 AN 2005:1338914 HCAPLUS <<LOGINID:20100609>>
 DN 144:211407
 TI Functional and biological activities of casein glycomacropeptide as influenced by lipophilization with medium and long chain fatty acid
 AU Wong, Peter Y. Y.; Nakamura, Soichiro; Kitts, David D.
 CS Food, Nutrition and Health, Faculty of Agricultural Sciences, University

of British Columbia, Vancouver, BC, V6T 1Z4, Can.
SO Food Chemistry (2006), 97(2), 310-317
CODEN: FOCHDJ; ISSN: 0308-8146

PB Elsevier B.V.

DT Journal

LA English

OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Caseinoglycomacropeptide inhibits adhesion of pathogenic

Escherichia coli strains to human cells in culture

AB Caseinoglycomacropeptide (CGMP) derived from κ -casein was investigated for its ability to inhibit the adhesion of 3 strains of verotoxigenic E. coli (VTEC) and 3 strains of enteropathogenic E. coli (EPEC) to human HT29 tissue cell cultures. Effects on adhesion of *Desulfovibrio desulfuricans*, *Lactobacillus pentosus*, *Lactobacillus casei*, *Lactobacillus acidophilus*, and *Lactobacillus gasseri* were also investigated. Generally, CGMP exerted effective anti-adhesive properties at a dose of 2.5 mg/mL, albeit with a high degree of strain specificity. The CGMP reduced adhesion of VTEC strains to <50% of the control and reduced adhesion of EPEC strains to between 80 and 10% of the control. The CGMP also reduced the adhesion of *L. pentosus* and *L. casei* to 44 and 42%, resp. A slight but significant reduction of *L. acidophilus*, to 81%, was observed, but no significant effects were detected with either *D. desulfuricans* or *L. gasseri*. Further investigation of the dose response relationships with the E. coli strains gave IC50 values ranging between 0.12 and 1.06 mg/mL.

2005:1064473 HCAPLUS <<LOGINID::20100609>>

DN 144:34035

TI Caseinoglycomacropeptide inhibits adhesion of pathogenic

Escherichia coli strains to human cells in culture

AU Rhoades, J. R.; Gibson, G. R.; Formentin, K.; Beer, M.; Greenberg, N.; Rastall, R. A.

CS Food and Bioprocessing Sciences Unit, The University of Reading, Reading, UK

SO Journal of Dairy Science (2005), 88(10), 3455-3459

CODEN: JDSCAE; ISSN: 0022-0302

PB American Dairy Science Association

DT Journal

LA English

OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Bovine glycomacropeptide is anti-inflammatory in rats with hapten-induced colitis

AB Milk κ -casein-derived glycomacropeptide has immunomodulatory and bacterial toxin binding effects. The intestinal anti-inflammatory activity of glycomacropeptide was assessed in trinitrobenzenesulfonic acid-induced colitis in rats. Rats were administered glycomacropeptide daily starting either 2 d before (pretreatment) or 3 h after (post-treatment) colitis induction. Pretreatment with glycomacropeptide had a dose-dependent anti-inflammatory effect, characterized by lower body weight loss, decreased anorexia (57%), colonic damage (65%), and weight to length ratio (32%), as well as a reduction

in colonic alkaline phosphatase activity (42%) and interleukin 1, trefoil factor 3, and inducible nitric oxide synthase mRNA levels ($P < 0.05$). The

mechanism of action of glycomacropeptide is unknown but is consistent with an inhibition of the activation of immune cells. The magnitude of the anti-inflammatory effect was generally comparable to that of sulfasalazine, an established drug used in the treatment of inflammatory bowel disease. Bovine glycomacropeptide may play a role in the management of patients with inflammatory bowel disease.

AN 2005:416156 HCAPLUS <<LOGINID:20100609>>

DN 143:126219

TI Bovine glycomacropeptide is anti-inflammatory in rats with hapten-induced colitis

AU Daddaoua, Abdelali; Puerta, Victor; Zarzuelo, Antonio; Suarez, Maria D.; Sanchez de Medina, Fermin; Martinez-Augustin, Olga

CS Departments of Biochemistry and Molecular Biology, School of Pharmacy, University of Granada, Spain

SO Journal of Nutrition (2005), 135(5), 1164-1170

CODEN: JONUAI; ISSN: 0022-3166

PB American Society for Nutritional Sciences

DT Journal

LA English

OSC.G 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Heparin binding peptides from the 23 N-terminal residues of α s1-casein present in commercial preparations of whey protein concentrate, glycomacropeptide and α -lactalbumin

AB α -Lactalbumin (α -La) and glycomacropeptide (GMP) were separated using heparin affinity chromatog. and a one step elution with 1 M NaCl. The eluted peaks were separated by RP-HPLC and identified by N-terminal sequencing followed by matrix-assisted laser desorption/ionisation time-of-flight (MALDI-TOF) mass spectrometry. The proteolytic activity in whey results in cleavage of at least 12 sites in the 23 N-terminal amino acids of α s1-casein (CN). The greatest concns. of the 1-23 N-terminal amino acids were found in the α -La product, whereas the greatest concentration of the 1-9 (heparin binding motif) and 1-13 fragments

were found in GMP and whey protein concentrate (WPC). The finding of an intact heparin binding 1-23 peptide in the α -La product may account for some of its reported activity against enteropathogenic E. coli.

AN 2001:223317 HCAPLUS <<LOGINID:20100609>>

DN 134:365974

TI Heparin binding peptides from the 23 N-terminal residues of α s1-casein present in commercial preparations of whey protein concentrate, glycomacropeptide and α -lactalbumin

AU Chatterton, D. E. W.; Sorensen, E. S.; Petersen, T. E.; Lonnerdal, B.

CS Arla Foods R and D, Brabrand, DK 8220, Den.

SO Milchwissenschaft (2001), 56(3), 143-146

CODEN: MILCAD; ISSN: 0026-3788

PB VV-GmbH Volkswirtschaftlicher Verlag

DT Journal

LA English

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Milk protein hydrolysate for addressing a bone or dental disorder

AB A composition for prevention or treatment of a bone or dental disorder comprises a milk protein hydrolysate, use of the milk protein hydrolysate in the manufacture of a composition for the treatment or prevention of a bone

or

dental disorder, and a method of treatment which comprises administering an effective amount of a milk protein hydrolyzate. In preferred embodiments the milk protein hydrolyzate is a hydrolyzate of casein, in particular a caseinoglycomacropeptide (CGMP), a mimetic, homolog or fragment thereof in a bioavailable form which retains the ability of CGMP to inhibit bone resorption or bone loss; or favor calcium absorption, retention or calcification; or a combination thereof.

AN 2000:608529 HCAPLUS <<LOGINID:20100609>>
 DN 133:183024
 TI Milk protein hydrolysate for addressing a bone or dental disorder
 IN Neeser, Jean-Richard; Offord Cavin, Elizabeth; Felix, Rolf;
 Tullberg-Reinert, Heidi; Ginty, Fiona; Barclay, Denis; Muhlbauer, Roman
 PA Societe des Produits Nestle S.A., Switz.
 SO PCT Int. Appl., 30 pp.
 CODEN: P1XXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------|---|------|----------|--|----------|
| PI | WO 2000049885 | A1 | 20000831 | WO 2000-EP1562 | 20000225 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1062876 | A1 | 20001227 | EP 1999-200544 | 19990225 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | CA 2360490 | A1 | 20000831 | CA 2000-2360490 | 20000225 |
| | EP 1154701 | A1 | 20011121 | EP 2000-910712 | 20000225 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | BR 2000008427 | A | 20020129 | BR 2000-8427 | 20000225 |
| | JP 2002537313 | T | 20021105 | JP 2000-600503 | 20000225 |
| | MX 2001006822 | A | 20011001 | MX 2001-6822 | 20010703 |
| | IN 2001CN01110 | A | 20100319 | IN 2001-CN1110 | 20010806 |
| | ZA 2001007831 | A | 20021223 | ZA 2001-7831 | 20010921 |
| PRAI | EP 1999-200544 | A | 19990225 | | |
| | WO 2000-EP1562 | W | 20000225 | | |
| OSC.G | 8 | | | THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS) | |
| RE.CNT | 15 | | | THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD | |
| | | | | ALL CITATIONS AVAILABLE IN THE RE FORMAT | |

L6 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
 TI Influence of glycosylation on micelle-stabilizing ability and biological properties of C-terminal fragments of cow's κ -casein
 AB A review with .apprx.160 refs. C-terminal fragment of bovine κ -casein contains glycosidic residues. There are several glycoforms of κ -casein containing different kinds and nos. of glycosidic residues. Such heterogeneity affects properties of this protein and its fragments. The C-terminal fragment of cow's κ -casein (residues: 106-169) is the main factor stabilizing casein micelles. Glycosidic moieties connected to this fragment enhance the ability of κ -casein to stabilize micelles and also the resistance of this protein to the action of proteolytic enzymes and high temperature in simple model systems. κ -Casein, its C-terminal fragment (macropeptide or glycomacro-peptide) or products of its proteolysis can inhibit proliferation of lymphocytes B, binding

Cholera toxin to its receptor, hemagglutination of influenza virus, adhesion of bacteria to cell surface, acid secretion in the stomach, as well as stimulate the release of cholecystokinin in the intestinal cells and the growth of Lactococcus lactis bacteria. Glycosidic moieties may act as an information carrier enabling recognition of compds. (e.g. components of cells) interacting with κ -casein, glycomacropeptide or its fragments.

AN 1997:130179 HCAPLUS <<LOGINID:20100609>>
DN 126:208568
OREF 126:40245a,40248a
TI Influence of glycosylation on micelle-stabilizing ability and biological properties of C-terminal fragments of cow's κ -casein
AU Dziuba, Jerzy; Minkiewicz, Piotr
CS Dep. Food Biochemistry, Olsztyn Univ. Agriculture & Technology, Olsztyn-Kortowo, 10-726, Pol.
SO International Dairy Journal (1996), 6(11-12), 1017-1044
CODEN: IDAJE6; ISSN: 0958-6946
PB Elsevier
DT Journal; General Review
LA English
OSC.G 49 THERE ARE 49 CAPLUS RECORDS THAT CITE THIS RECORD (49 CITINGS)

L6 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Increase of free sialic acid and gelation in UHT milk
AB The free sialic acid content of 4 pasteurized and 3 UHT-treated com. milks has been measured and compared. The sialic acid content of the UHT milks was 50%-215% greater than comparable fresh pasteurized samples. One sample of UHT milk was kept 17 mo after the expiration date. The sialic acid content in this sample was approx. 3-fold higher than the equivalent fresh UHT sample. Electrophoretic anal. of pH 4.6 insol. casein from the UHT milks showed evidence of proteolysis of the κ -casein component into para- κ -casein and the glycomacropeptide. Residual plasmin and proteases from psychrotrophic bacteria slowly cleave κ -casein in the UHT milks, thus releasing the sialic acid-containing glycomacropeptide and ultimately resulting in gelation of the milk. The determination of free sialic acid appears to be a useful method to monitor the quality of UHT milk during storage.

AN 1996:321644 HCAPLUS <<LOGINID:20100609>>
DN 125:32283
OREF 125:6315a,6318a
TI Increase of free sialic acid and gelation in UHT milk
AU Zalazar, C.; Palma, S.; Candiotti, M.
CS Facultad de Ingenieria, Quimica UNL, Santiago del Estero, 2829, Argent.
SO Australian Journal of Dairy Technology (1996), 51(1), 22-23
CODEN: AJDTAZ; ISSN: 0004-9433
PB Dairy Industry Association of Australia, Inc.
DT Journal
LA English

L6 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Method for production of a kappa-casein glycomacropeptide and use of a kappa-casein glycomacropeptide
AB For production of a kappa-casein glycomacropeptide (GMP), whey was subjected to ultrafiltration with membranes that retain proteins and GMP, the retentate was heat treated and acidified to pH 4-5, and the precipitate generated was separated from the supernatant/filtrate solution of GMP.
GMP. GMP can be used as a part of the diet for specified patients and as a medicament against diarrhea caused by viral infection in the intestines. Thus, a slurry of whey concentrate with a protein content of 8%
was

prepared The slurry was heat treated at 95° for 15 min, then cooled to 50° and adjusted to pH 4.5 with HCl. Then, ultrafiltration with membranes with a cut off value of 100,000 Dalton was performed. The permeate was concentrated to 10 °Brix by hyperfiltration and spray dried. Protein constituted 53.4% of the dry matter, and the phenylalanine content of the protein was .apprx.1/3 that of the raw material. The product 35.25 g was combined with butter oil 18.00, lactose 20.00, and water 426.75 g, mixed, and homogenized to make a pleasant-tasting milklike product for phenylketonurea patients.

AN 1994:654373 HCAPLUS <<LOGINID:20100609>>

DN 121:254373

OREF 121:46439a,46442a

TI Method for production of a kappa-casein glycomacropeptide and use of a kappa-casein glycomacropeptide

IN Nielsen, Per Munk; Tromholt, Niels

PA Novo Nordisk A/S, Den.

SO PCT Int. Appl., 11 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------|--|------|----------|-----------------|----------|
| PI | WO 9415952 | A1 | 19940721 | WO 1994-DK13 | 19940107 |
| | W: AU, CA, JP, KR, NZ, US | | | | |
| | RU: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | AU 9458329 | A | 19940815 | AU 1994-58329 | 19940107 |
| PRAI | DK 1993-21 | A | 19930108 | | |
| | WO 1994-DK13 | W | 19940107 | | |
| OSC.G | 16 | | | | |
| RE.CNT | 1 | | | | |

THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI In vitro modulation of oral bacterial adhesion to saliva-coated hydroxyapatite beads by milk casein derivatives

AB Bovine caseinate, derivs. of its glycosylated moiety [caseinoglycomacropeptide (CGP)], and caseinophosphopeptides were evaluated as inhibitors of adhesion of oral bacteria to saliva-coated hydroxyapatite beads (S-HA). All milk casein-derived components behaved as potent inhibitors of Streptococcus sanguis OMZ 9 and Streptococcus sobrinus OMZ 176 adhesion to S-HA, whereas neither bovine serum albumin nor polyethyleneglycol were able to interfere with the adhesion of these strains. By contrast, none of the mol. species tested was able to inhibit the attachment of Actinomyces viscosus Ny 1 to S-HA. On the other hand, casein derivs. were shown to displace human serum albumin from S-HA beads. They were also able to bind to the bacterial cell surface of all strains examined Collectively, these findings suggest that interactions between acidic casein-derived milk components and the biol. surfaces involved in bacterial adhesion to S-HA result in an inhibitory effect that is selective for the oral streptococci examined

AN 1994:651086 HCAPLUS <<LOGINID:20100609>>

DN 121:251086

OREF 121:45743a,45746a

TI In vitro modulation of oral bacterial adhesion to saliva-coated hydroxyapatite beads by milk casein derivatives

AU Neeser, J-R; Golliard, M; Woltz, A; Rouvet, M; Dillmann, M-L; Guggenheim, B

CS Nestle Research Centre, Nestec Limited, Lausanne, Switz.

SO Oral Microbiology and Immunology (1994), 9(4), 193-201
CODEN: OMIMEE; ISSN: 0902-0055

DT Journal
LA English

OSC.G 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

L6 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Method for preparing κ -casein glycomacropeptides from whey
AB κ -Casein glycomacropeptides are prepared from whey by adjusting pH to 5.0, heating to 80° for 5 min, and separating with <0.5 μ m pore size filtration membrane and >50,000 dalton ultrafiltration membrane. The title method was used for preparing κ -casein glycomacropeptides from cheddar cheese and gouda cheese. The prepared κ -casein glycomacropeptides can inhibit the adhesion of *Escherichia coli* or influenza virus to intestine and can therefore be used in foods or pharmaceuticals to prevent infections.

AN 1994:129044 HCAPLUS <<LOGINID::20100609>>

DN 120:129044

OREF 120:22629a,22632a

TI Method for preparing κ -casein glycomacropeptides from whey
IN Shimatani, Masaharu; Yamabe, Yoichi; Sato, Noribumi; Uchida, Yukio; Kawasaki, Isaihiro

PA Snow Brand Milk Prod Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 05271295 | A | 19931019 | JP 1992-74258 | 19920330 |
| | JP 3225080 | B2 | 20011105 | | |
| PRAI | JP 1992-74258 | | 19920330 | | |

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L6 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Use of sialic acid-containing or -binding compounds to neutralize bacterial toxins

AB Sialic acid-binding proteins derived from cow's milk, sialic acid-binding peptides obtained by treating the sialic acid-binding proteins with protease, and sialic acid-containing oligosaccharides interfere with the binding of bacterial enterotoxins (including cholera toxin) to receptors so as to neutralize the toxicity. Chinese hamster ovary K1 cells (CHO-K1 cells) can be morphol. altered by cholera toxin. Sialic acid-binding proteins κ -casein and lactoferrin, sialic acid-binding peptide κ -casein glycomacropeptide, and sialic acid-containing oligosaccharide sialyllactose all interfered with the morphol. alteration of CHO-K1 cells caused by cholera toxin. κ -Casein, lactoferrin, κ -casein glycomacropeptide, and sialyllactose also interfered with the binding of cholera toxin to the cell receptor ganglioside GM1. These compds., administered orally for 7 days at 0.2, 0.5, and 1.0 mg/day to mice which were then given 0.25 mg cholera toxin on day 8, drastically decreased the incidence of diarrhea as compared with the control group. Suggested pharmaceutical forms and doses of medicament containing ≥ 1 of the compds. were given.

AN 1991:37621 HCAPLUS <<LOGINID::20100609>>

DN 114:37621

OREF 114:6459a,6462a

TI Use of sialic acid-containing or -binding compounds to neutralize bacterial toxins

IN Isoda, Hiroko; Kawasaki, Yoshihiro; Tanimoto, Morimasa; Dosako, Shunichi;
Idota, Tadashi
PA Snow Brand Milk Products Co., Ltd., Japan
SO Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------|----------------|--|----------|-----------------|----------|
| PI | EP 385118 | A2 | 19900905 | EP 1990-101834 | 19900130 |
| | EP 385118 | A3 | 19910731 | | |
| | EP 385118 | B1 | 19940119 | | |
| | R: DE, FR, GB | | | | |
| | JP 02207089 | A | 19900816 | JP 1989-27823 | 19890207 |
| | US 5260280 | A | 19931109 | US 1992-913491 | 19920714 |
| | US 5330975 | A | 19940719 | US 1992-913500 | 19920714 |
| PRAI | JP 1989-27823 | A | 19890207 | | |
| | US 1990-473761 | B3 | 19900202 | | |
| OSC.G | 8 | THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS) | | | |

L6 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI κ - Casein and glycomacropeptide as infection protectants

AB κ - Casein and GP (glycomacropeptide obtained by κ - casein hydrolysis) are infection protectants. Oral administration of 1 mg κ -casein or GP/day to rats totally suppressed morbidity from exptl. diarrhea induced by Escherichia coli.

AN 1989:166167 HCAPLUS <<LOGINID:20100609>>

DN 110:166167

OREF 110:27357a,27360a

TI κ - Casein and glycomacropeptide as infection protectants

IN Dosako, Shunichi; Kusano, Hiroko; Deya, Eiki; Idota, Tadashi

PA Snow Brand Milk Products Co., Ltd., Japan

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | EP 291265 | A1 | 19881117 | EP 1988-304195 | 19880509 |
| | EP 291265 | B1 | 19910828 | | |
| | R: BE, FR, GB | | | | |
| | JP 63284133 | A | 19881121 | JP 1987-118612 | 19870515 |
| | JP 2631470 | B2 | 19970716 | | |
| | US 5147853 | A | 19920915 | US 1990-604333 | 19901026 |
| | US 5344820 | A | 19940906 | US 1992-879421 | 19920507 |
| PRAI | JP 1987-118612 | A | 19870515 | | |
| | US 1988-191252 | B1 | 19880506 | | |
| | US 1990-604333 | A1 | 19901026 | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

L6 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Specific and nonspecific inhibition of adhesion of oral actinomyces and streptococci to erythrocytes and polystyrene by caseinoglycopeptide derivatives

AB Various caseinoglycopeptide derivs. prepared from mammalian milk were

evaluated as inhibitors of hemagglutinations mediated by *Actinomyces viscosus* Nyl, *Streptococcus sanguis* OMZ9, and, for comparative purposes, plant lectins from *Arachis hypogaea* and *Bauhinia purpurea*. It was found that recognition of the β -D-galactose-(1 \rightarrow 3)-2-acetamido-2-deoxy-D-galactose carbohydrate chain by *Actinomyces viscosus* Nyl organisms and *Arachis hypogaea* and *B. purpurea* agglutinins had similar structural requirements; in all cases, the desialylated bovine caseinoglycomacropeptide, on which several units of the above mentioned disaccharide are clustered, behaved as the most potent hemagglutination inhibitor. By contrast, none of the preps. tested inhibited erythrocyte agglutination by *S. sanguis* OMZ9. Thus, the desialylated bovine caseinoglycomacropeptide acts as a potent and specific inhibitor of oral *Actinomyces* adhesion to cell membranes (a soft surface) and could be used as a probe for the study of recognition mechanisms mediated by *Actinomyces* galactose-binding lectins. Both native and desialylated variants of the same bovine glycomacropeptide also totally prevented the adhesion of *Actinomyces viscosus* Nyl, *S. sanguis* OMZ9, and *S. mutants* OMZ176 to polystyrene surfaces. Neither mono- nor disaccharides related to caseinoglycopeptide carbohydrates prevented adhesion; highly pos. or neg. charged polypeptides and polysaccharides were either not or only moderately active. Besides these glycomacropeptides, an inhibitory activity was also exhibited by other mucin-type glycoproteins carrying short O-linked carbohydrate chains (including bovine submaxillary mucin), polyethylene glycol, and bovine serum albumin. Consequently, caseinoglycopeptide prevention of oral bacterial adhesion to polystyrene tubes (a hard surface) takes place with no species specificity and can be compared to nonspecific inhibition exhibited by various polymers with very different structural characteristics.

AN 1989:72413 HCAPLUS <<LOGINID::20100609>>

DN 110:72413

OREF 110:11891a,11894a

TI Specific and nonspecific inhibition of adhesion of oral actinomyces and streptococci to erythrocytes and polystyrene by caseinoglycopeptide derivatives

AU Neeser, Jean Richard; Chambaz, Arlette; Del Vedovo, Simone; Prigent, Marie Jose; Guggenheim, Bernhard

CS Nestle Res. Cent., Nestec-Ltd., Vers-chez-les-Blanc, CH-1000, Switz.

SO Infection and Immunity (1988), 56(12), 3201-8

CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

OSC.G 34 THERE ARE 34 CAPLUS RECORDS THAT CITE THIS RECORD (34 CITINGS)